

FLORID CEMENTO-OSSEOUS DYSPLASIA OF THE JAWS: PURELY A RADIOGRAPHIC DIAGNOSIS

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ABSTRACT

Florid cemento-osseous dysplasia (FLCOD) has been described as a condition that characteristically affects the jaws of middle-aged black women. It usually exhibits as multiple radiopaque cementum-like masses distributed throughout the jaws. Radiographically, FLCOD appears as dense, lobulated masses, often symmetrically located in various regions of the jaws. Here we report a case of 49-year-old female, diagnosed with FLCOD on the basis of clinical and radiographic findings.

KEYWORDS: Fibroosseous Lesion, Florid Cemento-osseous Dysplasia, Gigantiform Cementoma, Multiple Cemento-ossifying Fibroma, Acellular Cemento-osseous Tissue

INTRODUCTION

FLCOD is rare in Indian population, and less than 10 cases have been reported in literature, but one cases of familial FLCOD in Indian family have been reported till now.¹in a systemic review done, only 2% cases have been reported in the Indians.² FLCOD is characterized by multiple, exuberant lobulated densely opaque masses restricted to alveolar process in either or both jaws. The term was first described by Melrose et al. in 1976.¹ The word florid was introduced to describe the wide-spread, extensive manifestation of the disease.¹ Middle-aged black women, Caucasians and Asians are most commonly affected. Age of occurrence is 4th -5th decade.³ FLCOD is not associated with extragnathic and blood chemistry abnormalities.² The disease has a tendency for bilateral occurrence often symmetrically.²

Case Report: A 49-year-old female patient, reported to our department with a chief complaint of pain and pus discharge from the lower right back teeth region since 3 days. The pain was gradual in onset, intermittent, mild in intensity, which aggravated on chewing food on that side and relieved on its own and, not associated with any constitutional symptoms, with no history of trauma and paraesthesia. Patient gave similar history of pain and pus discharge in the same region 3 years back for which she underwent a local surgery and extraction of teeth in lower right back teeth region. Her medical history was non-contributory. On Extra oral examination, a solitary right submandibular lymph node was palpable, measuring of size 1x1cm tender, soft to firm in consistency and freely mobile. On intra-oral examination a sinus opening was seen in the buccal vestibule of edentulous region of 45, 46, and caries in relation to 43, 44 was noted. Based on the

clinical findings a Provisional diagnosis of Chronic periapical abscess in relation to 43,44 was given, with a differential diagnosis of Chronic suppurative osteomyelitis in relation to 43,44.

A panoramic radiograph (OPG) was advised, which revealed Multiple lobulated radio-opaque mass of variable size, at periapical region of 44,37,35 and edentulous area of 45,46,15,16 surrounded by a radiolucent rim. Patient also had previous panoramic radiographs of 2008 and 2013. 2008 OPG (Figure 1) revealed mixed radiolucent, radio-opaque sclerotic mass at peri apical region of 44, 35, 37 and edentulous area of 45, 46, above the inferior alveolar nerve canal and lobulated radio-opaque mass was seen in edentulous area of 15, 16 surrounded with indistinct radiolucent rim. The findings of 2013 OPG (Figure 2) were similar to 2014 OPG (Figure 3) except, the lesions were less radio-opaque. Based on clinical and radiographic findings final diagnosis of Florid Cemento-osseous Dysplasia with secondarily infected partially edentulous area of 45, 46 were given.

DISCUSSIONS

Florid cemento-osseous dysplasia (FLCOD) is the most dramatic and rare variant of the cemento-osseous lesions. Normal cancellous bone is replaced by dense, a cellular cemento- osseous tissue. FLCOD has been proposed in the 2nd edition of the World Health Organization (WHO) and defined as “Lobulated masses of dense, highly mineralized, almost a cellular cemento-osseous tissue typically occurring in several parts of the jaws.”⁴

FLCOD presents as bilateral lesions in the tooth-bearing areas of the mandible or of both the mandible and maxilla and often confined within alveolar bone, as seen in our case.³ Suggested pathogenesis of FLCOD is due to the proliferation of the fibroblasts present in the periodontal ligament or from the remnants of the cementum left after the extraction of the teeth or trauma or dysplastic changes in the periodontal ligament.³

It may be familial with an autosomal dominant inheritance pattern.¹ The lesion may be completely asymptomatic or symptomatic. Symptoms such as dull pain or drainage are almost always associated with the exposure of sclerotic calcified masses in the oral cavity which may occur secondary to progressive alveolar atrophy under a denture or after extraction of teeth in that region.⁵ If asymptomatic, detected incidentally when radiographs are taken for some other purpose. Radiographically, the lesions appear as multiple sclerotic masses located in two or more quadrants usually in the tooth-bearing regions often confined within the alveolar bone.⁶ Radiographic appearance depends upon the stage of development and maturity of the lesion. The lesions typically demonstrate two identical patterns of maturation; initially, the lesions were predominantly radiolucent, mixed gradually and more radiopaque in later stages with a thin peripheral radiolucent rim.⁶ In our case the lesions were mixed and more radio-opaque with a thin peripheral radiolucent rim.

The distinctive clinical and radiographic patterns of FLCOD allows a strong presumptive diagnosis without the necessity of biopsy.⁶ Radiologically, it must be differentiated from other lesions like Paget's disease, Chronic sclerosing osteomyelitis, focal cement-osseous dysplasia (FCOD), periapical cement-osseous dysplasia (PCOD), Complex odontome.^{1,6} However, FCOD is a single lesion compared with FLCOD that consists of multiple lesions. PCOD usually involves the anterior segment of the mandible, but FLCOD usually involves three or four quadrants. Paget's disease affects the entire mandible, while FLCOD is placed above the inferior alveolar canal. Paget's disease is often polyostotic. Chronic diffuse sclerosing osteomyelitis appears as a single, poorly delineated opaque segment of the mandible, whereas FLCOD is seen as multiple round or lobulated opaque masses.

Dental imaging may be helpful in differentiating fibro-osseous lesions from odontoma, in which the CT number for enamel is higher than that for cementum and odontomes are more radio dense structure.⁶

Once the diagnosis has been established in an asymptomatic patient under normal circumstances, there is no need to exist further treatment. The patient should be regular followed-up, recall examinations with prophylaxis and reinforcement of proper oral hygiene care to control periodontal disease and prevent tooth loss.⁷ In the absence of clinical signs, reevaluation with panoramic or CT imaging for every 2 or 3 years is adequate because of its ability to give axial, sagittal and frontal views.^{7,8} Management of the symptomatic patient is more difficult because chronic inflammation and infection develop within densely mineralized tissue. Generally antibiotics are not effective in FLCOD so their tissue diffusion is poor.^{1,3} Indeed biopsy increases the risk of infection or may cause jaw fractures and it is not normally justified to surgically remove these lesions as this often requires extensive surgery. When surgical intervention is indicated a remodeling, resection is recommended for esthetic reasons.⁹

CONCLUSIONS

FLCOD is rare condition of jaw bones and diagnosed principally by its characteristic clinico radiological features. Unless the patient is symptomatic no surgical treatment is required. However, long term follow up should be done to assess the progress of the condition.

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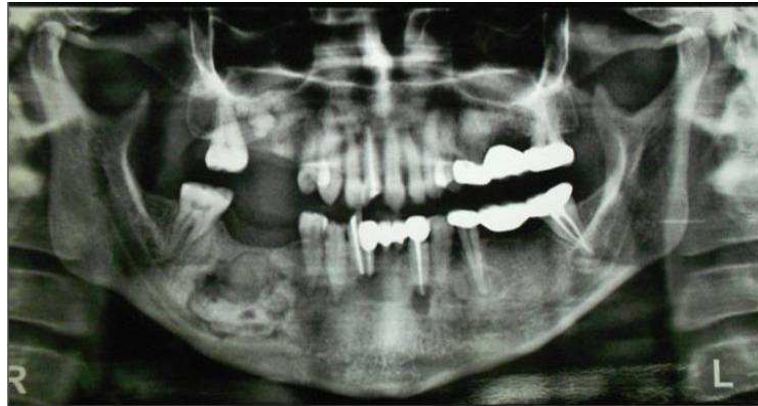
APPENDICES**LEGENDS**

Figure1: OPG (2008) Revealing Multiple Mixed Radio-Opaque and Radiolucent Lobulated Masses Involving All Four Quadrants

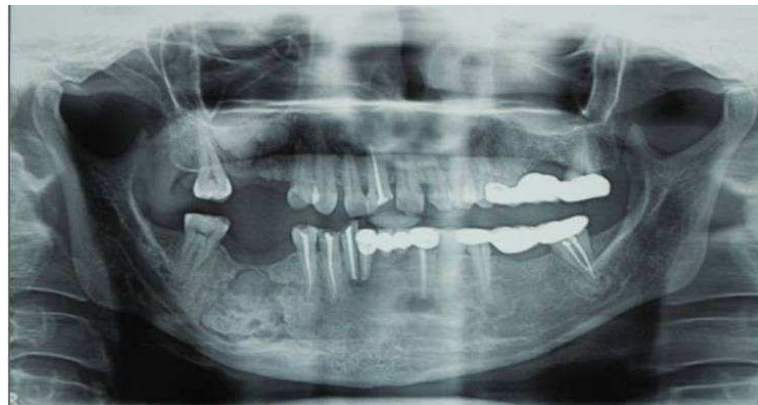


Figure 2: (2013) Lobulated Mass Located above the Inferior Alveolar Canal Characteristic Feature of FLCOD



Figure 3: Examination of the OPG (2014) Revealed Multiple Sclerotic Masses with Radiolucent Borders Found in the Maxilla and Mandible which were Symmetrical at Presentation